CONTENTS

B. V. Derjaguin and his contributions xv

Part 1. Thermodynamics of Fluid Interlayers

1. Two- and three-dimensional aspects of surface phenomena. *Research in Surface Forces*, 1966, Vol.2,pp.3-8, Consultants Bureau, New York. 1
   Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

2. Theorie des Anhaftens kleiner Teilchen. *Kolloid* Z., 1934, Vol. 69, No. 2, pp. 155-164 6

3. Ultramikrometrische Untersuchungen der Solvathüllen und des "elementaren" Quellungsaktes. *Acta phys.-chim.*, 1936, Vol. 5, No. 1, pp. 1-22 (with E. Obuchov) 16

4. Range of action of surface forces. *Nature*, 1935, Vol. 138, No. 3486, pp. 330-331 22
   Reprinted by permission from NATURE © 1935 Macmillan Magazines Ltd.

5. Range of molecular action of surfaces and polymolecular solvate (adsorbed) layers. *C.R. Acad. Sci. URSS*, 1939, Vol. 23, No. 7, pp. 671-673 (with M. Kussakov and L. Lebedeva) 23

6. An experimental investigation of polymolecular solvate (adsorbed) films as applied to the development of a mathematical theory of the stability of colloids. *Acta phys.-chim.*, 1939, Vol. 10, No. 1, pp. 25-44 (with M. Kussakov) 26

7. A theory of capillary condensation in the pores of sorbents and of other capillary phenomena taking into account the disjoining action of polymolecular liquid films. *Acta phys.-chim.*, 1940, Vol. 12, No. 2, pp. 181-200 46

8. On the question about the repulsive forces between surfaces divided by liquid films. *Acta phys.-chim.*, 1940, Vol. 12, No. 2, pp. 314-316 62

9. Disjoining effect of free liquid films, and its role in the stability of foams. *Kolloid Zh.*, 1953, Vol. 15, No. 6, pp. 416-425 (with A. S. Titievskaya) 64

10. Investigations of the forces of interaction of surfaces in different media and their application to the problem of colloid stability. *Discuss. Faraday Soc.*, 1954, No. 18, pp. 24-27 (with A. S. Titievskaya, I. I. Abrikossova and A. D. Malkina) 74
    Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

11. Contributions to the general discussion. *Discuss. Faraday Soc.*, 1954, No. 18, pp. 182-187 77
    Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

12. Direct measurement of molecular attraction between solids separated by a narrow gap. *Quart. Rev.*, 1956, Vol. 10, No. 3, pp. 295-329 (with I. I. Abrikossova and E. M. Lifshitz) 83

13. Optical study of the adsorption and surface condensation of vapours in the vicinity of saturation on a smooth surface. *Proceedings of the Second International Congress on Surface Activity*, Vol. 1. Solid–gas interface. London, Butterworths, 1957, pp. 145-152 (with Z. M. Zorin) 118
Permission by Butterworths to publish this paper is gratefully acknowledged.

14. Correct form of the equation of capillary condensation in porous bodies in application to the separation of absorption and capillary condensation in slits and porous bodies of known structure and determination of their structure by adsorption and sorption isotherms. *Proceedings of the Second International Congress on Surface Activity*, Vol. 2. London, Butterworths, 1957, pp. 153-159 126
Permission by Butterworths to publish this paper is gratefully acknowledged.

15. Measurement of molecular attraction between solid bodies of different nature at large distances. *Proceedings of the Second International Congress on Surface Activity*, Vol. 3. London, Butterworths, 1957, pp. 398-405 (with I. I. Abrikossova) 133
Permission by Butterworths to publish this paper is gratefully acknowledged.

16. Direct measurements of molecular attraction of solids. *J. Phys. Chem. Solids*, 1958, Vol. 5, Nos. 1-2, pp. 1-10 (with I. I. Abrikossova) 141

17. The force between molecules. *Sci. Amer.*, 1960, Vol. 203, No. 1, pp. 47-53 151

18. The effect of electrolyte concentration on the height of the force barrier for adhesion of platinum wires. *Research in Surface Forces*, 1963, pp. 116-119. Consultants Bureau, New York (with T. N. Voropaeva and E. N. Kabanov) 158
Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

19. Untersuchungen des Spaltdruckes dünner Filme, deren Entwicklung, Ergebnisse und zu lösende aktuelle Probleme. *Colloid & Polymer Sci.*, 1975, Vol. 253, pp. 492-499 162
Permission by Steinkopff Verlag Durmstadt to publish this paper is gratefully acknowledged.

20. On the role of electrostriction terms in ionic electrostatic repulsion. Electrostatic component of the disjoining pressure. *J. Colloid & Interface Sci.*, 1976, Vol. 56, No. 3, pp. 492-494 170
Permission by Academic Press © to publish this paper is gratefully acknowledged.

21. Polymolecular adsorption and capillary condensation in narrow slit pores. *J. Colloid & Interface Sci.*, 1976, Vol. 54, No. 2, pp. 157-175 (with N. V. Churaev) 173
Permission by Academic Press © to publish this paper is gratefully acknowledged.

22. Disjoining pressure of thin layers of binary solutions. *J. Colloid & Interface Sci.*, 1977, Vol. 62, No. 3, pp. 369-380 (with N. V. Churaev) 192
Permission by Academic Press © to publish this paper is gratefully acknowledged.

23. Analytical calculation of repulsion forces arising when the non-ionic diffuse adsorption layers are overlapped. *Colloid & Polymer Sci.*, 1980, Vol. 258, No. 3, pp. 433-438 204
Permission by Steinkopff Verlag Durmstadt to publish this paper is gratefully acknowledged.

24. On long-range forces of repulsion between biological cells. *Colloids & Surfaces*, 1984, Vol. 10, pp. 77-84 (with M. V. Golovanov) 210
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

25. Influence of the ambient medium on the disjoining pressure of liquid metallic films. *J. Surface Sci.*, 1985, Vol. 159, pp. 69-82. North-Holland, Amsterdam (with V. I. Roldughin) 218
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

26. Disjoining pressure in liquid metallic films. *J. Colloid & Interface Sci.*, 1985, Vol. 108, No. 1, pp. 207-214 (with L. F. Leonov and V. I. Roldughin) 232
Permission by Academic Press © to publish this paper is gratefully acknowledged.

27. Some results from 50 years' research on surface forces. *Progress in Colloid and Polymer Sci.*, 1987, Vol. 74, pp. 17-30 240
Permission by Steinkopff Verlag Durmstadt to publish this paper is gratefully acknowledged.

28. Modern state of the investigation of long-range surface forces. *Langmuir*, 1987, Vol. 3, No. 5, pp. 601-606 254

29. Investigation of the isotherms of the disjoining pressure of wetting films of binary nonionic solutions by the ellipsometric method. *Colloids & Surfaces*, 1988/89, Vol. 33, pp. 43-54 (with L. B. Boinovich) 260
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

30. The current state of the theory of long-range surface forces. *Colloids & Surfaces*, 1989, Vol. 41, pp. 223-237 (with N. V. Churaev) 272
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

Part 2. Properties Including Structure of Fluid Interlayers

31. Die Formelastizität der dünnen Wasserschichten. *Z. Phys.*, 1933, Vol. 84, Nos. 9-10, pp. 657-680 287

32. Viscosity studies of liquid boundary layers by the blow-off method. *Proceedings of the Second International Congress on Surface Activity*, Vol. 3. Electrical phenomena and solid–liquid surface. London, Butterworths, 1957, pp. 531-538 (with V. V. Karassev) 301
Permission by Butterworths to publish this paper is gratefully acknowledged.

33. Birefringence of thin liquid films. *Trans. Faraday. Soc.*, 1964, Vol. 60, p. 449 (with R. Green-Kelly) 309
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

34. Shear elasticity of a liquid in bulk and in boundary layers. *Research in Surface Forces*, 1971, Vol. 3, pp. 36-43. Consultants Bureau, New York 316
Permission by Plenum Publishing Corp. to publish this paper is gratefully acknowledged.

35. Boundary viscosity of polydimethylsiloxane liquids and their binary mixtures. *Special Discussions of the Faraday Society*, 1970, No. 1, pp. 98-104 (with V. V. Karassev, I. A. Lavygin, I. I. Skorokhodov and E. N. Khromova) 322
Permission by The Royal Society of Chemistry to publish this paper is gratefully acknowledged.

36. Capillary osmosis through porous partitions and properties of boundary layers of solutions. *J. Colloid & Interface Sci.*, 1972, Vol. 38, No. 3, pp. 584-595 329
Permission by Academic Press © to publish this paper is gratefully acknowledged.

37. Electrical properties of boundary layers of fatty acids. *Kolloid Zh.*, 1975, Vol. 37, No. 2, pp. 254-260 (with M. M. Snitkovskii) 341

38. Special properties and anisotropy of the boundary layers of liquids. *Chemica Scripta*, 1976, Vol. 9, pp. 97-102 347
Permission by The Royal Swedish Academy of Sciences to publish this paper is gratefully acknowledged.

39. Letters to the editors concerning the paper by W. D. Bascom and C. R. Singleterry entitled "Research in the boundary viscosity of liquids close to a solid surface by resorting to a blow-off method". *J. Colloid & Interface Sci.*, 1978, Vol. 66, No. 3, pp. 573-574 (with V. V. Karassev and E. N. Khromova) 353
Permission by Academic Press © to publish this paper is gratefully acknowledged.

40. Structural and thermodynamic peculiarities of the boundary layers of liquids. *Pure and Appl. Chem.*, 1980, Vol. 52, pp. 1163-1178 355
Permission by IUPAC to publish this paper is gratefully acknowledged.

41. Viscosity of nonfreezing thin interlayers between the surfaces of ice and quartz. *J. Colloid & Interface Sci.*, 1980, Vol. 74, No. 1, pp. 173-179 (with S. S. Barer, N. V. Churaev, O. A. Kiseleva and V. D. Sobolev) 371
Permission by Academic Press © to publish this paper is gratefully acknowledged.

42. Liquid-crystalline state of the wall-adjacent layers of some polar liquids. *J. Colloid & Interface Sci.*, 1983, Vol. 96, No. 2, pp. 492-503 (with Yu. M. Popovskii and B. A. Altoiz) 379
Permission by Academic Press © to publish this paper is gratefully acknowledged.

43. Thermal expansion of water in fine pores. *J. Colloid & Interface Sci.*, 1986, Vol. 109, No. 2, pp. 586-587 (with V. V. Karassev and E. N. Khromova) 391
Permission by Academic Press © to publish this paper is gratefully acknowledged.

44. Liquid crystalline state of the wall-adjacent layers of some polar liquids. *Fluid Interfacial Phenomena*, Edited by C. A. Croxton. John Wiley & Sons Ltd, 1986, pp. 739-759 393
Reproduced by permission of John Wiley and Sons Limited.

45. Peculiarities of the thermal expansion of water in the pores of aerosil powder. *Colloids & Surfaces*, 1987, Vol. 25, pp. 397-400 (with V. V. Karassev and N. B. Ur'ev) 414
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

46. Calculation of the surface charge and potential and of the structural component of disjoining pressure in an interlayer in KCl solutions between glass samples. *Langmuir*, 1987, Vol. 3, No. 5, pp. 625-628 (with Ya. I. Rabinovich) 418

47. Structure of water in thin layers. *Langmuir*, 1987, Vol. 3, No. 5, pp. 607-612 (with N. V. Churaev) 422

48. Structural component of disjoining pressure in wetting films of nitrobenzene formed on the lyophilic surface of quartz. *Langmuir*, 1987, Vol. 3, No. 5, pp. 628-631 (with Yu. M. Popovskii and A. A. Goryuk) 428

49. Evaluation of the thickness of nonfreezing water films from the measurement of thermocrystallization and thermocapillary flows. *Langmuir*, 1987, Vol. 3, No. 5, pp. 631-634 (with N. V. Churaev, O. A. Kiseleva and V. D. Sobolev) 431

50. Interaction of hydrophobized filaments in aqueous electrolyte solutions. *Colloids & Surfaces*, 1988, Vol. 30, pp. 243-51 (with Ya. I. Rabinovich) 434
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

51. The influence of surface forces on the formation of structural peculiarities in the boundary layers of liquids and boundary phases. *Colloids & Surfaces*, 1989, Vol. 38, pp. 49-60 443
Permission by Elsevier Science Publishers to publish this paper is gratefully acknowledged.

52. The complex shear modulus of polymeric and small-molecule liquids. *Polymer*, 1989, Vol. 30, pp. 97-103 (with U. B. Bazaron, K. T. Zandanova and O. R. Budaev) 455
Permission by the publishers, Butterworth Heinemann Ltd. © to publish this paper is gratefully acknowledged.

53. Shear elasticity of low-viscosity liquids at low frequencies. *Phys. Rev. A*, 1990, Vol. 42, No. 4, pp. 2255-2258 (with U. B. Bazaron, Kh. D. Lamazhapova and B. D. Tsidypov) 462
Permission by The American Physical Society to publish this paper is gratefully acknowledged.

Reproduced with the permission of Pergamon Press Inc., by University Microfilms Inc. Duplication or resale without permission is prohibited.